

WHAT IS CLAIMED IS:

1. A sliding bearing comprising:

a cylindrical bearing body;

a plurality of sliding surfaces provided on an inner peripheral surface of said bearing body and spaced apart from each other in a circumferential direction;

a first slit portion provided in said bearing body and extending in an axial direction from one end face of said bearing body to this side of another end face of said bearing body;

a second slit portion provided in said bearing body and extending in the axial direction from the other end face of said bearing body to this side of the one end face of said bearing body;

at least one groove portion provided in an outer peripheral surface of said bearing body; and

an elastic ring which is fitted in said groove portion in such a manner as to project from the outer peripheral surface of said bearing body and to reduce a diameter of said bearing body.

2. The sliding bearing according to claim 1, wherein said first slit portion and said second slit portion are provided in plural numbers in said bearing body, each of said slit portions extends in the axial direction between adjacent ones of said sliding surfaces, and each of said first slit portions and each of said second slit portions are arranged alternately in the circumferential direction.

3. The sliding bearing according to claim 1 or 2, wherein each of said sliding surfaces is provided on the inner peripheral surface of said bearing body between positions each axially spaced apart a predetermined distance from each of the end faces of said bearing body.

4. The sliding bearing according to any one of claims 1 to 3, wherein said plurality of sliding surfaces are arranged at equal intervals in the circumferential direction.

5. The sliding bearing according to any one of claims 1 to 4, wherein at least two groove portions axially spaced apart from each other are provided in the outer peripheral surface of said bearing body, at least two elastic rings are respectively fitted in said groove portions in such a manner as to project from the outer peripheral surface of said bearing body and to reduce the diameter of said bearing body, and an axially central portion of each of said sliding surfaces is located between said two groove portions in the axial direction.

6. The sliding bearing according to claim 5, wherein each of said sliding surfaces is provided on the inner peripheral surface of said bearing body between said two groove portions in the axial direction.

7. The sliding bearing according to claim 5 or 6, wherein each of said sliding surfaces is provided on the inner peripheral surface of said bearing body by extending beyond said two groove portions in the axial direction.

8. The sliding bearing according to any one of claims 1 to

7, wherein said elastic ring has a volume greater than a volumetric capacity of said groove portion.

9. The sliding bearing according to any one of claims 1 to 8, wherein said elastic ring at an outer peripheral surface thereof is fitted to an inner peripheral surface of a tube with an interference, and said bearing body is fitted at the sliding surface thereof on an outer peripheral surface of a shaft by tightening the shaft with the resiliency of said elastic ring, to cause said bearing body to be interposed between the tube and the shaft.

10. The sliding bearing according to claim 9, wherein a clearance having a width of 0.3% to 10% of a radial maximum thickness of said bearing body at a portion, which constitutes a free end portion of the bearing body with respect to the tube, is produced between the inner peripheral surface of the tube and the outer peripheral surface of said bearing body at the portion constituting the free end portion thereof.

11. The sliding bearing according to claim 9 or 10, wherein said shaft is a steering column shaft, and said tube is a steering column tube.

12. The sliding bearing according to claim 9 or 10, wherein said shaft is a rack shaft, and said tube is a tubular member.

13. The sliding bearing according to any one of claims 1 to 12, wherein each of said sliding surfaces is one of a flat surface, an arcuate convex surface, and an arcuate concave surface.

14. The sliding bearing according to any one of claims 1 to 13, wherein each of said sliding surfaces is a flat surface, and a distance between said sliding surfaces radially opposing each other and parallel to each other is smaller than an inside diameter of said bearing body at each of the end faces thereof.

15. The sliding bearing according to any one of claims 1 to 13, wherein each of said sliding surfaces is an arcuate convex surface, and a distance between apices of said sliding surfaces radially opposing each other is smaller than an inside diameter of said bearing body at each of the end faces thereof.

16. The sliding bearing according to any one of claims 1 to 13, wherein each of said sliding surfaces is an arcuate concave surface, and a distance between bottoms of said sliding surfaces radially opposing each other is smaller than an inside diameter of said bearing body at each of the end faces thereof.

17. The sliding bearing according to any one of claims 9 to 12 and 14, wherein each of said sliding surfaces is a flat surface, and each of said sliding surfaces at an axially central portion thereof is adapted to tighten the shaft with the resiliency of said elastic ring.

18. The sliding bearing according to any one of claims 9 to 12 and 15, wherein each of said sliding surfaces is an arcuate convex surface, and each of said sliding surfaces at an apex thereof is adapted to tighten the shaft with the resiliency of said elastic ring.

19. The sliding bearing according to any one of claims 9 to

12 and 16, wherein each of said sliding surfaces is an arcuate concave surface, and each of said sliding surfaces at a bottom thereof is adapted to tighten the shaft with the resiliency of said elastic ring.

20. The sliding bearing according to claim 19, wherein the arcuate concave surface has a curvature smaller than that of the outer peripheral surface of the shaft or a curvature substantially equal thereto.

21. The sliding bearing according to any one of claims 1 to 20, wherein the inner peripheral surface of said bearing body has a first tapered surface extending with a gradually reduced diameter from the one end face of said bearing body to an axial one end of said sliding surface, as well as a second tapered surface extending with a gradually reduced diameter from the other end face of said bearing body to an axial other end of said sliding surface.

22. The sliding bearing according to claim 21, wherein said first tapered surface has an axial length greater than that of said second tapered surface.

23. The sliding bearing according to claim 21 or 22, wherein said first tapered surface has a cone angle greater than that of said second tapered surface.

24. The sliding bearing according to any one of claims 1 to 23, wherein said plurality of sliding surfaces and said bearing body are integrally formed of a synthetic resin.

25. A bearing mechanism comprising:

a tube;  
a shaft inserted and fitted in said tube; and  
said sliding bearing according to any one of claims 1 to 24 interposed between said tube and said shaft,  
said elastic ring at the outer peripheral surface thereof being fitted to the inner peripheral surface of said tube with an interference, said bearing body being disposed on the inner peripheral surface of said tube with a clearance between the outer peripheral surface thereof and the inner peripheral surface of said tube, and said bearing body being fitted on an outer peripheral surface of said shaft by tightening said shaft with the resiliency of said elastic ring by means of said sliding surfaces.

26. The bearing mechanism according to claim 25, wherein an outside diameter of said elastic ring is greater than a diameter of the inner peripheral surface of said tube, and an inside diameter of said elastic ring is smaller than a diameter of the bottom of said groove portion.

27. The bearing mechanism according to claim 25 or 26, wherein said tube integrally has a pawl portion which engages said bearing body.

28. The bearing mechanism according to claim 25 or 26, wherein said tube has one of a recessed portion and a through hole which engages said bearing body.